

FIJALKOWSKI, Włodzimierz

Role of breathing in labor. Ginek. Pol. 33 no.1:25-30 '62.

1. Z II Kliniki Położnictwa i Chorob Kobietych AM w Łodzi Kierownik:  
prof. dr med. S. Krzysztowski.

(RESPIRATION) (LABOR)

FIJALKOWSKI, Włodzimierz; BUKOWCZYK, Adam

Mental conditions of the parturient. Comparative studies on women unprepared for labor by the psychoprophylactic method. Ginek. pol. 33 no.5:601-609 '62.

1. Z II Kliniki Chorob Kobięcych i Położnictwa AM w Łodzi Kierownik: prof. dr med. S. Krzysztopouloski i z Kliniki Chorob Psychiczych AM w Łodzi Kierownik: prof. dr med. S. Cwynar.  
(NATURAL CHILDBIRTH)

FIJALKOWSKI, Włodzimierz

Effect of the psychoprophylactic preparation in pregnancy  
on the course of the 1st stage of labor. Ginek. pol. 34 no.2:  
215-224 '63.

1. Z II Kliniki Położnictwa i Chorob Kobietych AM w Łodzi  
Kierownik: prof. dr med. S. Krawczyński.  
(NATURAL CHILDBIRTH)

FIJALKOWSKI, Włodzimierz

Role of psychogenic factors in labor prolongation. Ginek. pol.  
34 no.3:377-380 '63.

1. Z II Kliniki Położnictwa i Chorob Kobietych AM w Łodzi  
Kierownik: prof. dr med. S. Krzysztopouloski.  
(LABOR COMPLICATIONS) (FEAR) (ENVIRONMENT)  
(EMOTIONS)

STEMPIEN, Ryszard, dr. med.; TKACZ, Bogumił; FIJALKOWSKI, Włodzimierz

Differential diagnosis of infectious hepatitis in pregnancy.  
Ginek. Pol. 36 no.7:755-762 J1'65.

1. Z Kliniki Chorob Zakaźnych Akademii Medycznej w Łodzi  
(p.o. Kierownika: dr. med. R. Stempień) i z II Kliniki  
Położnictwa i Chorob Kobięcych Akademii Medycznej w Łodzi  
(Kierownik: prof. dr. med. S. Krzysztowski).

FIJAN, N.

How Vransko Lake was populated by fresh water fish. p. 54.  
MORSKO RIBARSTVO. (Udruzenje morskog ribarstva Jugoslavije)  
Rijeka. Vol. 8, no. 2, Feb. 1956.

SOURCE:

East European Accessions List, (EEAL),  
Library of Congress Vol. 5, no. 11, Nov., 1956.

FIJAN, Nikola

Hemopoietic functions of kidneys in certain species of fresh-water fishes. Biol glas 14 no.3/4:167-210 '61.

1. Zavod za anatomiju, histologiju i embriologiju; Zavod za biologiju i patologiju peela, svilaca i riba; Hematoloski laboratorij Klinike za unutrašnje bolesti Veterinarskog fakulteta u Zagrebu.

\*

FIJAS, J.

The Monitor and the English Spectator. p. 71.

NUKLEONIKA. (Polska Akademia Nauk. Komitet do Spraw Pokojowego Wykorzystania  
Energii Jądrowej)  
Warszawa. Vol. 3, no. 2, 1958  
Poland/

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, no. 6, June 1959  
Uncl.



FIJLKOWSKI, D.

"A plan for establishing a forest and steppe reserve in Labanie near Zamosc."

p. 14 ( Chronmy Przyrode Ojczysta, Vol 14, no. 4, July/ Aug. 1958. Krakow, Poland.)

Monthly Index of East European Accessions (EEAI) LC. Vol. 8, No. 1, Jan. 59

POLAND/Optics - Optical Methods of Analysis.

K

Abs Jour : Ref Zhur Fizika, No 4, 1960, 10013

Author : Fijlkowski Jerzy

Inst : ~~Warsaw University of Technology~~

Title : Quantitative Spectrographic Analysis of Magnesium Alloys

Orig Pub : Chem. Analit, (Polska), 1959, 4, No 1-2, 455-461

Abstract : A procedure is described for determining the alloying elements (aluminum, zinc, manganese) and of the impurities (copper, silicon, iron, nickel) in magnesium alloys. To excite the spectrum, a condensed spark was used. Standard photographic analysis methods were used. The error in the determination of the lines ranges from 4.4 to 8.9%.

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- 171 -

FIK, C.: CISK, B.: WLIASZ, J.

Prospecting for petroleum and natural gas in the Carpathian Mountains. p.121

Wiadomosci Naftowe. (Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Przemysly Naftowego i Zwiazke Zawodowego Gornikow Naftowcow)  
Krosno, Poland Vol. 5, no. 6, June 1959

Monthly list of East European Accessions (EEAI) LC, Vol./no. 2,  
Feb. 19~~60~~<sup>9</sup>

Uncl.

FIK, Czeslaw

Some results of geologic prospecting in the western Ukraine. Wiad  
naft 6 no.4:73-75 Ap '60. (EKAI 9:7)  
(Ukraine--Geology)

Fig. 14.

Zinc rectification. Aleksander Knapkowicz and Henryk Piek (Zaklad Met. Inst. Politechniczny, Prol. Tech. PAK, Krakow, Poland). *Arch. Górniczo-Hutnicza* 2, 243-252 (1954) (English summary, 359-2).—Chem. engineering calcns. are presented for Zn rectification in 2 columns by the method of the New Jersey Zinc Co. The crude Zn is heated to above 600° and introduced into approx. the middle of the 1st column. Fe, Pb, and other impurities and some Zn flow out from the bottom while most of the Zn and Cd distil out from the top of the column. The mixt. of Zn and Cd is reheated and introduced into approx. the middle of the 2nd column from which Cd distils out and pure Zn flows out from the bottom. Each column has 35-46 trays made out of SiC with some addn. of plastic clay. The following rectification formulas were derived:

$$b_1/b_2 = \frac{[(1 - P_1/(P_1 + P_2))^{M+1/N} / (1 - P_1/(P_1 + P_2))^{M+1/N} + (1 - P_2/P_1)^{M+1/N} (1 - [1 - P_2/(P_1 + P_2)])^{M+1/N}]}{[1 - P_1/(P_1 + P_2)]^{M+1/N} (1 - [1 - P_2/(P_1 + P_2)])^{M+1/N}}$$

$$b_1/b_2 = \frac{[(1 - P_1/P_2)^{M+1/N} (1 - [1 - P_1/(P_1 + P_2)])^{M+1/N} / (1 - P_2/P_1)^{M+1/N} + (1 - P_2/P_1)^{M+1/N} (1 - [1 - P_2/(P_1 + P_2)])^{M+1/N}]}{[1 - P_2/(P_1 + P_2)]^{M+1/N} (1 - [1 - P_2/(P_1 + P_2)])^{M+1/N}}$$

where  $b_1$  = the mole fraction of the metal component in  $P_1$ ,  $b_2$  = mole fraction of the same component in  $P_2$ ,  $b_3$  = mole fraction of the same component in  $P_3$ ,  $P_1$  = the same component in the feed,  $P_2$  = the component condensed in the upper part of the column,  $P_3$  = the component in the liquid residue,  $P_4$  = the component vaporized in the lower part of the column,  $P_5$  = the component in vapors leaving the column, and  $M$  and  $N$  = consts. which are calcd. from equil. between soln. and vapor.  $P_1 = P_2 + P_3 - P_4$ ;  $P_2 = P_4 - P_5$ . All values of  $P$  are in moles/24 hrs. The above formulas are valid for continuous rectification. However, because of entrainment of liquid droplets in the overhead vapors a correction has to be made. The amt. of entrained metal = approx.  $C(P_4 - P_5)(2P_4 - P_5)P_5$ , where  $C$  is a const. which is calcd. from the material and heat balances.

Frank J. Hendel

PIK, Henryk

Engineer Henryk Pik, "Economic Analysis of the Mine Production Methods Used in Poland," Kuadr i Metale Niezelazne (Nonferrous Metals and Ores), Vol. II, No. 3, Jul-Sep, and No. 4, Oct-Dec 57, Katowice, pages 17-21, and 103-107.

JPRS/DC-L-1129, 17 Nov 58.

FIK, H.

Distr: 4E2c

✓ Purification of cadmium. Zakłady Cynkowe "Wet-  
nowiec" (by A. Krupkowski, H. Fik, and K. Rzyman).  
Pol. 41,351, Dec. 3, 1958. Cd of 99.99% purity can be  
- obtained from melted Cd sponge or Zn-Cd alloys. Part of  
the alloy is vaporized and freed from higher boiling constitu-  
ents in the distn. app. provided with a suitable filter.  
Quantity of the circulating metal in the distg. app. is at  
least 4 times that of the furnace charge. K. Dojanowska

5  
F. mjc (40)

CH

AKERMAN, Karol; BRAFMAN, Marek; FIK, Henryk; KITALA, Jan; NOWAK, Maciej;  
POCZYNAJLO, Andrzej

Isotopic studies on the separation course of impurities  
during the zinc redistillation process. Archiw hutn 8  
no. 2: 103-118 '63.

1. Instytut Badan Jadrowych Polskiej Akademii Nauk, Zaklad XVI, Warszawa (for Akerman, Brafman, Nowak).
2. Biuro Projektow, Zjednoczenie Gorniczo-Hutnicze Metali Biezelaznych, Gliwice, (for Fik)
3. Zaklady Cynkowe Silesia, Huta Welnowiec (for Kitala).



FIK, Henryk, dr inz.

Rectification of metals by the full equilibrium method.  
Rudy i metale 9 no. 8:402-412 Ag '64.

TELESZYNSKI, Zdzislaw, dr. med. ; FIK, Marian

A case of dislocation of the elbow with simultaneous epiphyseolysis of the ulna. Chir. narzad. ruchu ortop. Pol. 30 no.2: 143-146 '65.

1. Z Oddzialu Urazowego Woj. Stacji Pogotowia Ratunkowego w Rzeszowie (Ordynator: dr. med. Z. Teleszynski).

AMS-AB

FIKAR, J.

*General Meteorology*

14-22  
 Fikar, J. 40 let dobrovolného pozorování na meteorologické stanici. [Forty years of  
 voluntary observation at a meteorological station.] *Meteorologické Zprávy*, 4(5-6) 132, 1950.  
 photo. In Czech. MH-BH. Note on František Horušínský who died on July 8, 1950 after  
 40 years of continuous observation and educational work and is described as one of the most  
 conscientious collaborators of the Czechoslovak meteorological service. His portrait is  
 presented. *Subject Headings*: 1. Obituaries 2. Cooperative observers 3. Hofmeister, František  
 4. Czechoslovakia.—C. T. 551 3.92

FIKAR, S.; BINOVEC, J.; ZEZULKOVA,

Determination of the preserving effect of tetramethylthiuram disulfide in cosmetics. p. 26

PRUMYSL POTRAVIN. (Ministerstvo potratinarskyho prumyslu) Praha, Czechoslovakia  
Vol. 10, no. 1, Jan. 1959

Monthly List of East European Accessions (EEAI), LV, Vol. 8, no. 7, July 1959  
Uncl.

FIKAR, Z.: FAJMAN, Z.

"Polyecran. -ab. Application of logical members in automatic control."

Automatisace. Praha, Czechoslovakia. Vol. 2, no. 3, Mar. 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

I 34547-66

ACC NR: AP6024710

SOURCE CODE: CZ/0042/65/000/010/0604/0619

AUTHOR: Pokorny, Jiri--Pokornyy, Yu. (Engineer; Candidate of sciences); Fikart, Josef--Fikart, I.; Javorsky, Stanislav--Yavorskiy, S. 42  
43

ORG: Institute of Radio Engineering and Electronics, CSAV, Prague (Ustav radiotechniky a elektroniky CSAV)

TITLE: Measurement of the properties of a tandel in a parametric frequency multiplier

SOURCE: Elektrotechnicky casopis, no. 10, 1965, 604-619

TOPIC TAGS: electronic equipment, frequency multiplication, electronic circuit, electric capacitor, resistor, electric capacitance, electric conductance

ABSTRACT: The paper presents the derivation of a method for determination of the properties of tandels (temperature auto-stabilized nonlinear dielectric element) in a parametric frequency multiplier, and experimental results are given. The tandel properties are expressed by means of an equivalent circuit formed by a parallel combination of a nonlinear lossless capacitor and a nonlinear resistor. The dependence of the capacitance and the conductance of the equivalent circuit on the voltage is expressed by the first terms of a power series. The expansion coefficients of the nonlinear capacitance and conductance into the power series

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L 34547-66

ACC NR: AP6024710

are calculated from the measured values in the parametric frequency tripler with a tandel and are plotted on diagrams as a function of the available power of the source and the ambient temperature. All measured and estimated values depend solely on the temperature and supplied power. The power dissipated in the tandel is of great magnitude. This article was presented by T. Petrik. Orig. art. has: 12 figures and 20 formulas. [Based on authors' Eng. abst.] [JPRS: 34,691]

SUB CODE: 09 / SUBM DATE: 21Jan65 / ORIG REF: 002 / OTH REF: 005

Card 2/2 *py*

**"APPROVED FOR RELEASE: 06/13/2000**

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CIA-RDP86-00513R000413020003-8"

KOZLIK, Miroslav, dr.; KADLEC, Josef, inz.; FIKART, Miloslav

Problem of gain and radiation in antenna systems.  
Slaboproudý obzor 25 no.10:589-600 0 '64.

1. Tesla Hloubetin National Enterprise, Prague.

PROKS, Ctirad; FIKEJZ, Josef

Scleroma neonatorum. Cesk. pediat. 16 no.11:984-989 II '61.

1. Patologickoanatomicke oddeleni, prim. MUDr. C.Proks, a detsko  
oddeleni, prim. MUDr. J.Fikejz, OUNZ, v Pisku.  
(SCLEREMA NEONATORUM)

# CZECH

(Paper) chromatographic division of multivalent phenols.  
 S. Miler (Charles Univ., Prague). *Pracovní Listy* 6, 225-24 (1963).—Out of 15 solvents capable of sepp. phenolic compds., the system benzene 9, 1-HaOH, and water 10 effected good distribution. By means of ammoniacal soln. of AgNO<sub>3</sub>, Pavy's reagent, and a soln. of phloroglucinol (I) in 2N NaOH and of fluorescence in ultraviolet light, paper chromatograms of ether exts. of hydrolyzed urine were obtained showing sensitivity of 250 γ. Normal urine contained 6 mg. of pyrocatechol (II) /l. Urine of workers exposed to benzene vapors contained up to 100 mg. II, 6 mg. hydroquinone/l., and 2 unidentified metabolites of benzene characterized by 8 stains. Benzene is not excreted in the form of resorcinol, pyrogallol, or l.

L. J. Urbáček

FISER, K.: FIKER, S.

Determination of water on skin surface. Cesk. dermat. 31 no.5:  
241-248 Oct 56.

1. Ustav hygieny v Praze, reditel doc. Dr. K. Symon.  
(SKIN, metabolism,  
water, determ. (Cz))  
(WATER, determination,  
in skin (Cz))

FISER, K.; FIKER, S.

Determination of oiliness of the skin. Cesk. dermat. 31 no.6:  
315-320 Dec 56.

1. Ustav hygieny v Praze, (reditel doc. MUDr. K. Symon).  
    (SKIN,  
        oiliness, determ. (Cs))  
    (FATS, determination,  
        on skin surface (Cs))

FISER, K.; BINOVEC, J.; FIKER, S.; ZAHRADNIK, M.

Dermal cleansing agents for workers in industry. J. Hyg. Epidem.,  
Praha 1 no.2:172-178 1957.

1. Institute of Hygiene, Dermatological Clinic of the Medical Faculty  
of Hygiene and the Experimental Division of the Prague Cosmetic  
Factories, Prague.

(DETERGENTS,

dermal cleansing agents for workers in indust.)

(INDUSTRIAL HYGIENE

same)

*FIKER, S.*

CZECHOSLOVAKIA / Chemical Technology. - Safety First Technique. H-6  
Sanitation Technique. Chemical Products and Their  
Application. Part 1.

Abs Jour : Referat. Zhurnal Khimiya, No 4, 1958, 11811.

Author : K. Fiser, J. Binovec, S. Fiker, M. Zahradnik.

Inst : Not given

Title : Detergents for Industrial Workers.

Orig Pub : Pracovni lekar., 1957, 9, No 3, 211 - 213.

Abstract : New detergents (D) containing vaseline oil, glycerin, diethylphthalate, colloid kaolin, condensation products of ethyleneoxide or alcohol, water etc. were studied during production and in a laboratory. The D-s were tried how they wash off lubricating oils, dyes, tar, carbon black for rubbers etc. It was found that the D-s possess a good washing

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CZECHOSLOVAKIA / Chemical Technology. - Safety First Technique. H-6  
Sanitation Technique. Chemical Products and  
Their Application. Part 1.

Abs Jour : Referat. Zhurnal Khimiya, No 4, 1958, 11811.

Abstract : capacity and irritate the skin less the water with soap.  
The state of the skin of the workers improved already after  
3 months of regular D use.

Card 2/2

*Fiker, S.*  
 Country : Czechoslovakia  
 Category = : Analytical Chemistry. Analysis of Organic Substances.  
 Abs. Jour. : Ref. Zhur.-Khimiya No. 6, 1959  
 Author : Fiker, S.; Hajek, V.  
 Institut. :  
 Title : Paper Chromatography of Higher Saturated Fatty Acids.  
 Orig. Pub. : Chem. listy, 1958, 52, No 3, 549-551

E-3

19181

Abstract : A modification of the chromatographic method of Spiteri (RZhKhimBkh, 1955, 6537) has made it possible to secure reproducible values of  $R_f$  of saturated fatty acids from  $C_{12}$  to  $C_{24}$ ; values of  $R_f$  depend on quality of paraffin oil used to treat the paper. Whatman paper No 3 is treated with a solution of 5 g paraffin (MP 42-46°) and 5 g paraffin oil (Sp. Gr. 0.900) in 100 ml  $CHCl_3$ - $C_6H_6$  mixture (4:1), and the chromatogram is developed by the ascending method, at 55°, with glacial  $CH_3COOH$  saturated with paraffin and with paraffin oil at the same temperature; in this manner are separated the acids from  $C_{12}$  to  $C_{24}$ . On development at 85°

Card: 1/3

E-41

Country : Czechoslovakia  
Category :

E-3

Abs. Jour. :

19181

Author :  
Institut. :  
Title :

Orig Pub. :

Abstract : with  $\text{CH}_3\text{COOH}$  saturated with the same substances at  $85^\circ$ , separation is effected of the acids from  $\text{C}_{24}$  to  $\text{C}_{34}$ . It is recommended to utilize two-dimensional chromatography and to develop in one direction at  $85^\circ$ , and then in the perpendicular direction at  $55^\circ$ . The mixture of acids can be first extracted with alcohol, thereby separating acids of less than  $\text{C}_{20}$ , and then carry out chromatography by the two-dimensional procedure, of the alcohol-insoluble mixture of higher acids. Individual acids are detected on the dried chromatograms by the action, for 45 minutes, of a 5%  $\text{AgNO}_3$  solution at a temperature of  $80^\circ$ , followed by washing with water. After drying of the processed chromatogram at  $150^\circ$   
Card: 2/3

Country : Czechoslovakia  
Category= :

E-3

Abs. Jour. :

19181

Author :  
Institut. :  
Title :

Orig. Pub. :

Abstract : brown spots appear at the places corresponding  
to the distribution of the acids (RZhKhim, 1956, 58490).  
-- J. Vanecek.

Card: 3/3

12-42

FIKERLE, J.

Mats made of insulating materials. p. 139

Ceskoslovenska vedecka technika spolocnost pro zdavotni techniku a  
vzduchotechniku, Praha, Czechoslovakia, Vol. 4, 1959.

Monthly List of East European Accessions, (EEAI) LC, Vol. 8, No. 7, July 1959.  
Uncl.

FIKERLE, J.

"Effect of radial clearance and prestressing on durability and loading capacity of antifriction bearings." p. 191.

STROJIRENSTVI. (Ministerstvo tezkého strojírenství, Ministerstvo přesného strojírenství a Ministerstvo automobilového průmyslu a zemědělských strojů). Praha, Czechoslovakia, Vol. 9, No. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8,  
August 1959.  
Uncla.

FIKERLE, J.

Moments of inertia in machines. p. 663.

STROJIRENSTVI. (Ministerstvo tezkého strojírenství, Ministerstvo přesného strojírenství a Ministerstvo automobilového průmyslu a zemědělských strojů) Praha, Czechoslovakia, Vol. 9, no. 9, Sept. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 9, no. 1, Jan, 1960

Uncl.

VOCILKA, M., inz.; FIKEROVA, J.

Determining the pulp content in paper by bromination. Sbor  
cel pap no.7:259-268 '62.



FKC, L.

New photoelectric multipliers with secondary emission.

P. 478. (STROJNOELEKTROTECHNICKY CASOPIS.) (Bratislava, Czechoslovakia)  
Vol. 8, No. 1, 1957

SC: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, 1958

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their  
Application. Ceramics. Glass. Binding Materials.  
Concrete.

H-13

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5517.

Author : Fikes, Ladislav.

Inst :

Title : Simple Hermetic Packing of Glass for Electric Wiring.

Orig Pub: Strojnoelektrotechn. casop. 9, No 3, 139-143.

Abstract: The description of glass packing of electric wiring  
in a vacuum-drying appliance for drying frozen biolo-  
gical tissues is presented. In the preparation of this  
packing, the inside surface of the steel flange is  
enamelled, on which occasion fine-grained pulverized  
glass, particle size 5  $\mu$ , is used for the preparation  
of the enamel. After that the flange is placed on a gra-

Card : 1/3

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their  
Application. Ceramics. Glass. Binding Materials.  
Concrete.

II-13

Abs Jour: Ref Zhur-Khin., No 2, 1959, 5517.

phite base, in which the electrodes are fixed, and the space between the flange and the electrodes is filled with glass powder, grain size 0.3 mm. After the inside space has been filled with glass, the flange is put into a muffle furnace at 650° for 6 hours, after which it is gradually cooled and taken out from the furnace. The packing prepared in this way is a fused joint of metal and glass, characterized by a sufficiently high strength. The metal, the coefficient of thermal expansion of which is greater than that of glass, compresses the latter, but glass withstands great compressive stresses. Packing prepared

Card : 2/3

FINES, L.

A few remarks on vacuum valves providing controlled leaks. p. 129.  
(Strojnoelektrotechnický Casopis, Vol. 8, No. 2, 1957, Bratislava,  
Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

FIKES, L.

TECHNOLOGY

Periodical: SDELOVACI TECHNIKA. Vol. 6, no. 8, Aug. 1958.

FIKES, L. Connecting electric leads to germanium and silicon. p. 307.

Monthly List of East European Accession (EEAI) LC, Vol. 8, no. 3  
March 1959 Unclass.

FIKES, L.; MARTON, K.

Design, calculation, and construction of a special direct-heating diode.  
p. 297.

ELEKTROTECHNICKY CASOPIS. (Slovenska akademia vied) Bratislava,  
Czechoslovakia. Vol. 10, no. 5, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

FIKES, L.

Notes on the hygienic aspects of working with mercury. p. 306.

ELEKTROTECHNICKY CASOPIS. (Slovenska akademia vied.) Bratislava,  
Czechoslovakia. Vol. 10, no. 5, 1959.

Monthly list of East European Accessions (EEAI) LC, vol. 9, no. 1, Jan. 1960.

Uncl.

S/058/62/000/011/038/061  
A160/A101

AUTHORS: Borcsányi, Vojtech, Fikes, Ladislav

TITLE: A method of introducing small and accurately-proportioned quantities of mercury in a vacuum device

PERIODICAL: Referativnyy zhurnal, Fizika, no. 11, 1962, 28, abstract 11-3-55n.P (Czechosl. pat., cl. 21f, 82/02; 21g, 12/01, no. 99735, May 15, 1961)

TEXT: According to the proposed method, the mercury is introduced in the vacuum device not in its pure form but in the form of alloy with metal. This permits to decrease the partial pressure of the mercury vapors down to the level which is harmless from a physiological point of view ( $\sim 10^{-5}$  mm mercury column). Lead, indium and other metals possessing a low vapor pressure at 800°C may be used for alloying. One of the potential alloys consists of 30 weight % of mercury and 70 weight % of lead; another alloy - of 37 weight % of mercury and 63 weight % of indium. The decomposition of the alloy takes place during the heating.

[Abstracter's note: Complete translation]

N. S.

Card 1/1



FIKH, B.M., kand.istor.nauk; ARZHAYEVA, L.V.; BARSEQYAN, M.V., kand.  
istor.nauk; GOLUB, I.P.; GRIGOR'YEVA, Z.G., kand.istor.nauk;  
MARASH, Ya.N., kand.istor.nauk; MARKOVSKIY, D.S., kand.  
istor.nauk; PESTRAK, F.S.; GOLUBTSOVA, P., red.; SLAVYANIN, I.,  
tekh.n.red.

[Grodno; historical study] Grodno; istoricheskii ocherk. Minsk,  
Gos.izd-vo BSSR, Red.sotsial'no-ekon.lit-ry, 1960. 150 p.  
(MIRA 14:3)

(Grodno--History)

(Grodno--Economic conditions)

PERIN/BRITISH, S. S.

33344. Tsitrusovyye Kul'tury V Moldavii. Vinodeliye I Vinogradarstvo Moldavii, 1949, No. 5, C. 45-46.

SO: Letopis' Zhurnal'nykh Statey Vol. 45, Moskva, 1949

FIKHMEN, A. I.

Light Locating Rangefinders

Tr. Mosk. in-ta inzh. geod., aerofotos'yemki i kartogr., No 19, 1954, pp 59-68

Operation and schematic construction of two types of electro-optical rangefinders are described. The first type emits pulses of light, which come back after having been reflected at the other end, allowing distance determination within  $\pm 3$  m error. The phase range-finder emits light sinusoidally modulated which after reflection strikes a photomultiplier. The phase shift indicates the distance. (RZhAstr, No 5, 1955)

SO: Sun. No. 639, 2 Sep 55

F1 K H T A A N A I

507/6-22-7-4/25

), Sokolova, O. I.

57(2), 5(4)  
AUTHOR:

### Results of the Competition for the 3rd Improving Suggestion (ivgi konkurs na luchshaye razvichal'stvo predlozheniye)

Кодовый: Геодезия и картография. 1959. № 7. pp 17-21 (1959)

**ABSTRACT:**

In May 1955, the ordinary competition for the best improving suggestion in the field of topographic-geodesic and geodetic instruments was held at the Glavvoye upravleniye gosstatizma i kartografii MVD 258 (Main Administration for Statistics and Cartography of the Ministry of Internal Affairs of the USSR). 7 aerogeodetic services, 6 cartographic institutes of the USSR, 7 aerogeodetic services, 6 cartographic institutes of the USSR, and 30 cartographic suggestions were submitted. The 1st prize of 1,000 rubles was awarded to I. A. (Minsk Cartographic Institute), 2nd prize of 500 rubles to V. A. (Minsk Cartographic Institute), 3rd prize of 250 rubles to V. A. (Minsk Cartographic Institute), 4th prize of 100 rubles to V. A. (Minsk Cartographic Institute), 5th prize of 50 rubles to V. A. (Minsk Cartographic Institute), 6th prize of 25 rubles to V. A. (Minsk Cartographic Institute), 7th prize of 10 rubles to V. A. (Minsk Cartographic Institute), 8th prize of 5 rubles to V. A. (Minsk Cartographic Institute), 9th prize of 2 rubles to V. A. (Minsk Cartographic Institute), 10th prize of 1 ruble to V. A. (Minsk Cartographic Institute).

The 2nd prizes of 750 rubles were awarded to: 1) V. G. Kozlovskiy, I. A. Kozlovskiy, O. P. Shchegolev, V. M. Vartutis, Yu. E. Galitskiy, O. F. Zheller and V. P. Stepanov (VNIIC) "for Technology of the Use of Standard"; 2) V. V. Gurevich, Y. N. Vargin, ...

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1. O. Maslovskiy, G. D. Zhukov, L. I. Sankova for "Technology of the Manufacture of Combined Dispositives" (REKCh). 2. A. Levin (Moskovskoye AGP (Moscow AGP)) for "Reduction of Work in Evaluating the Accuracy of Synthetic Geodesic Nets Formed by Figures of Regular Shape". 4) N. V. Shvayder (Sovetskoye AGP (Sovietburg AGP)) for "Flight Collapsible Ladder of Bural for Prospecting". 5) The first prizes of 500 rubles each were awarded to 1) A. A. Kostomarov (Moskovskoye AGP (Moscow AGP)) for "Reduction of Mass Measurements of Materials AGP" for "Reduction of Mass Measurements of Materials AGP" (Moskovskoye AGP (Moscow AGP)). 2) V. D. Otkritskiy (Vostochnyye AGP (East AGP)) for "Construction of an Overhead Trolley for Timber Transport". 3) I. A. Lyzin (Moskovskoye AGP (Moscow AGP)) for "Variation in the Attachment of Photographs on the STS-2". 4) V. P. Arshavin (Moskovskoye AGP (Moscow AGP)) for "Painting by Electret Stages by 5-7 Meters". 5) D. N. Sazonov, I. V. Gurevich, Z. A. Aleksandrova, V. M. Yurgenko, V. K. Kozlov and G. A. Kozlov (REKCh) for "Technology of the Correlation and Edition of Topographic Maps by the Photocollage Method". 6) M. P. Chubarenko (Minskaya Kharograficheskaya fabrika (Minsk Cartographic Institute)) for "Vertical Pilling Machine for Brochures". 7) A. A. Murayev

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(Mekstskaya Kartograficheskaya Fabrika ("Central Cartographic Institute") for "Mechanism for the Loading of Trucks With Paper Rolls". 6) A. K. Popovskiy (Ukrainskoye AGP [Ukraine AGP]) for "Replacement of the Ink Lamp for the Helio-graphic-printing Machine E-1 by an Illuminating Device with Fluorescent Lamps DS-10". 7) G. F. Grigor'ev (Sverdlovskoye AGP [Sverdlovsk AGP]) for "Meter for Measuring in the Preparation of Map Compilations and Final Compilation". 8) M. D. Zhetelov (Sverdlovskoye AGP [Sverdlovsk AGP]) for "Method of Contact Mechanism in Map Compilations". 9) S. I. Zubov (Moskovskoye AGP [Moscow AGP]) for "Construction of a New National Compilation of the Territory of the USSR". 10) V. N. Yegorov (Kazanskoye AGP [Kazan AGP]) for "Trigonometric Leveling". 11) P. G. Minakov (Sverdlovskoye AGP [Sverdlovsk AGP]) for "New Numbering and Painting of Leveling Staffs". 12) G. I. Grinberg (Mekstskoye AGP [Moscow AGP]) for "Formulas and Table for Extreme Divergences between the Free Terms of Polar and Base Conditions Computed on a Plane and on a Sphere". Besides, the following suggestions were approved by the jury: 1) L. B. Tsyko (Sverdlovskoye AGP [Sverdlovsk AGP]), "Reference for Observations from the Telescopic Tower"; 2) M. P. Chikinsky

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BEZENOV, V.V.; POSTNIKOV, I.S.; FIKMAN, A.N.

Investigation of the process of using oxygen for liquid  
waste mixtures having active slime. Vod. i san. tekhn. no.  
8:22-26 Ag '56. (MLRA 9:10)

(Sewage--Purification)

FIKHMAN, B.A.

Living culture media in bacteriological investigation of pathological material for tuberculosis bacilli. Prob.tuberk., Moskva No.1:42-44 Jan-Feb 51. (CML 20:6)

1. Of the Department of Microbiology of Chernovitsy Medical Institute (Head of Department -- Prof.G.P.Kalin).

FIKHMAN, B. A.

USSR/Medicine - Crystal Phase of  
Bacteria Sep/Oct 52

"Crystal Formation in Bacterial Cultures," G. P.  
Kalina, B. A. Fikhman, Chernovtsy Med Inst

"Mikrobiologiya" Vol 21, No 5, pp 528-539

Authors review G. M. Bosh'yan's book "Nature of  
Viruses and Microbes," published in 1950, and give  
an account of some exptl work they did on patho-  
genic bacteria. Kalina and Fikhman think that  
G. M. Bosh'yan speaks in general terms, that his theories

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have little foundation, and that he offers no evi-  
dence which would aid in verification of his  
statements. They state that his only theories  
which may be ascribed to Bosh'yan are that microbes  
turn into crystals, that the crystals are extremely  
stable in that condition, and that they may regener-  
ate inversely into bacterial forms. They note that  
formation of crystals seems to be a property of the  
nutrient medium rather than of bacteria. All other  
theories claimed by Bosh'yan have been either known  
before or have been subjected to lively discussion  
for a number of yrs, the authors state.

229749



Distr: uE2o(j)/uE1j/uE3d

Page 3

FIKHMAN, B.A.

Stable turbidity scale for nephelometric quantitative analysis. Lab.  
delo 4 no.2:53-55 Mr-Ap '58. (MIRA 11:4)

1. Iz Gosudarstvennogo kontrol'nogo instituta syvorotok i vaktsin  
imeni Tarasevicha. (dir. - kandidat meditsinskikh nauk S.I.  
Didenko)

(NEPHELOMETRIC ANALYSIS)

PIKHMAN, B.A.

The problem of preparation of stable turbidity for the optic standardization of vaccine. Zhur. mikrobiol. epid. immu. 29 no.12:46-50 D '58.

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasévicha.

(VACCINES AND VACCINATIONS,

standard, with stable turbidity scales (Rus))

PIKHMAN, B.A.

Method of preparing a stable glass turbidity standard for the evaluation of the thymol test. Lab.delo 5 no.4:15-17 J1-Ag '59.

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha (dir. L.S. Ogloblina). (MIRA 12:12)

(TURBIDITY)

(THYMOL)

(LABORATORIES--APPARATUS AND SUPPLIES)

FIKHMAN, B.A.

Microrefractometric method of direct determination of live and dead bacterial cells. Zhur.mikrobiol.epid.i immun. 30 no.8:100-104 Ag '59.  
(MIRA 12:11)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh i biologicheskikh preparatov imeni Tarasevicha.  
(BACTERIA)

17(2)

AUTHOR:

Fikhman, B. A.

SOV/20-124-5-51/62

TITLE:

The Principle of Immersion Microrefractometry for Directly Determining Living and Dead Bacterial Cells (Printsip immersi-onnoy mikrorefraktometrii dlya pryamogo opredeleniya zhivyykh i mertvykh kletok bakteriy)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5, pp 1141-1143 (USSR)

ABSTRACT:

The determination of the number of living and dead cells and their numerical interrelations in microbial populations or suspensions is of great importance for various fields of practical and experimental microbiology. In spite of a great number of suggested methods there has hitherto been no sufficiently precise, objective and simple method of a direct, differentiated determination of the number of living and dead bacterial cells. The reason is that without additional actions the death of these cells cannot be directly observed. For this reason the phenomenon of irreversible change of the optical properties due to the death of the cells is remarkable (increasing optical density and refraction index). Only the introduction of the method of phase contrast into microscopy

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The Principle of Immersion Microrefractometry for  
Directly Determining Living and Dead Bacterial Cells

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made it possible to evaluate and explain the phenomenon mentioned. Special immersion media proved to be very useful (Refs 1-3,5). The use of albumin solutions in precisely determined concentrations (Ref 1) made it possible to elaborate the microrefractometric method of determining the concentration of the dry substance and water in living cells. It was found in the course of special experiments that maximum optical differentiation between living and dead cells is obtained by using immersion media having the same or a somewhat higher index of optical refraction than the protoplasm of living cells. Gelatine gels proved to be the most appropriate. The selection of gel concentration depends on the kind of micro-organism. For this purpose anoptical microscopy has to be applied. On a light-blue background of the preparation the following cells are visible: a) dazzling cells (dead) and b) "empty" cells surrounded by a thin shining seam (living) (Fig 1). The intermediate forms which sometimes can be observed probably represent different degrees of cell degeneration. At the end, the author tries to explain

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The Principle of Immersion Microrefractometry for  
Directly Determining Living and Dead Bacterial Cells

SOV/20-124-5-51/62

the phenomenon described. There are 1 figure and 5 references, 2 of which are Soviet.

ASSOCIATION: Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov im. L. A. Tarasevicha (State Checking Institute for Medicinal Biological Preparations imeni L. A. Tarasevich)

PRESENTED: October 16, 1958, by V. N. Shaposhnikov, Academician

SUBMITTED: October 6, 1958

Card 3 /3



FIKHMAN, B. A. Cand Med Sci -- (diss) "Optical standardization of bacterial preparations." Mos, 1959. 14 pp (Acad Med Sci USSR. Inst of Epidemiology and Microbiology im Gamaleya) List of author's works at end of text (10 titles) (KL, 52-59, 127)

-151-

FIKHMAN, B.A.; GRIGOR'YEVA, V.M.

Numerical turbidity equivalent for the test organism spore suspensions  
used for the determination of the activity of antibiotics. Antibiotiki  
5 no.4:105-107 J1-Ag '60. (MIRA 13:9)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh  
preparatov imeni L.A. Tarasevicha.  
(ANTIBIOTICS) (BACTERIA, SPOREFORMING)

FIKHMAN, B.A.

Changes in the optical density of bacterial suspensions following prolonged preservation. Zhur. mikrobiol. epid i immun. 31 no.6: 111-112 Je '60. (MIRA 13:8)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha.  
(BACTERIA)

FIKHMAN, B.A.

Turbidity standards made of plastic materials for the optical  
standardization of bacterial suspensions. Lab. delo [7] no.4;  
52-54 Ap '61. (MIRA 14:3)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh  
preparatov imeni L.A.Tarasevicha (dir. - L.S.Oglovlina), Moskva.  
(NEPHELOMETRIC ANALYSIS)

FIKHMAN, B.A.

Units of turbidity for optic standardization of bacterial preparations.  
Lab. delo 7 no.6:52-54 Je '61. (MIRA 14:7)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh  
preparatov imeni L.A.Tarasevicha (dir. L.S.Ogloblina).  
(TURBIDITY) (BACTERIOLOGY--EQUIPMENT)

FIKHMEN, B.A.

Test vessels for photoelectric colorimeters-nephelometers. Lab.  
delo 7 no.7:61-62 J1 '61. (MIRA 14:6)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh  
preparatov imeni L.A.Tarasevicha (dir. L.S.Ogloblina).  
(COLORIMETERS)

FIKHMAN, B.A.; PRYADKINA, M.D.

Use of the immersion microrefractometric method in the direct determination of the ratio of dead and live cells in live plague vaccines. Zhur.mikrobiol.epid.i immun. 32 no.3:60-64 Mr '61.  
(MIRA 14:6)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha.  
(PLAGUE)

FIKHMAN, B.A.

New medium for the microscopic counting of bacteria in a chamber.  
Lab. delo 8 no.2:55-56 F '62. (MIRA 15:2)

1. Gosudarstvennyy ~~konferen~~'nyy institut meditsinskikh biologicheskikh  
preparatov imeni L.A.Tarasevicha, Moskva.  
(BACTERIOLOGY TECHNIQUE)



FIKHMAN, B.A.; SHIRYAYEVA, V.L.

Siliconization of metallic cylinders used for determining  
the activity of antibiotics. Med. prom. 15 no.6:50-52 Je  
'61. (MIRA 15:3)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh  
biologicheskikh preparatov, imeni Tarasevicha.  
(ANTIBIOTICS)

FIKHMEN, B.A.

Photoelectric device for the optic standardization of bacterial preparations. Med. prom. 16 no.3:35-38 Mr '62. (MIRA 15:5)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni L.A.Tarasevicha.  
(BACTERIOLOGY--EQUIPMENT AND SUPPLIES)

FIKMAN, B. A.

Optical effect of physical and chemical actions on bacterial suspensions. Zhur. mikrobiol., epid. i immun. 32 no.8:116-122 Ag '61. (MIRA 15:7)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha.

(BACTERIOLOGY)

FIKHMAN, B.A.; SHIRYAYEVA, V.L.

Numerical equivalent of turbidity for suspensions of cells of yeast  
test cultures used for determining the activity of antibiotics.  
Antibiotiki 7 no.8:742-744 Ag '62. (MIRA 15:9)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh  
preparatov imeni L.A.Tarasevicha.  
(ANTIBIOTICS) (YEAST)

L 10117-63

ACCESSION NR: AP3001478

S/0217/63/008/003/0380/0384

AUTHOR: Fikhman, B. A.

45

TITLE: Light diffusion of bacterial suspensions in the visible spectrum area

SCURCE: Biofizika, v. 8, no. 3, 1963, 380-384

TOPIC TAGS: Light diffusion, bacterial suspensions, turbidity, FEK-N colorimeter-nephelometer, staph aureus, staph albus

ABSTRACT: Optical methods of determining dispersity of bacterial suspensions by light diffusion make it possible to study processes taking place in the system without interfering with its movement, and this is important for microbiological research. Suspensions of rod-shaped and spherical bacteria of different dispersity were used in 0.15 M solution of NaCl in distilled water. Suspensions were prepared from washed cells of day old cultures of B. coli, S. typhi, B. dys. Fl., B. pertussis, Staph. aureus, Staph. albus, and Sarcina lutea. Suspensions used had concentrations from 1 to 2 mlrd of microbe bodies in 1 ml. Light diffusion was conducted by the light transmission method because the bacterial

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L 10119-63

ACCESSION NR: AP3001478

suspensions had relatively high turbidity values of the order  $10 \text{ sup } -2 \text{ cm sup } -1$ . Optical densities of the suspensions at different wave lengths were determined by a photoelectric FEK-N colorimeter-nephelometer. Experimental data established that light diffusion (turbidity) of bacterial suspensions conforms to the empirical equation  $D \text{ sub } \lambda \text{ equals } k \lambda \text{ sup } -n$  (D represents optical density and the power of n is functionally connected with the mean size of the cells). Application of this function makes it possible to study mean cell size and concentration, which are the basic characteristics of the dispersion phase of bacterial suspensions, by optical methods. Orig. art. has: 2 tables, 2 figures, 1 equation.

ASSOCIATION: Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov im. L. A. Tarasevicha, Moscow (State Control Institute of Biological Preparations)

SUBMITTED: 22Dec61      DATE ACQ: 12Jun63      ENCL: 00

SUB CODE: 00      NR REF SOV: 007      OTHER: 004

*90A 1/2*  
*2/2*

FIKHMAN, B.A.; BRAUDE, N.I.

Numerical turbidity equivalent for suspensions of brucellosis  
bacteria. Zhur. mikrobiol., epid. i immun. 40 no.1:120-123'63.

(MIRA 16:10)

1. Iz Gosudarstvennogo kontrol'nogo instituta imeni Tarase-  
vicha i Moskovskogo instituta epidemiologii i mikrobiologii.

\*

FIKMAN, B.A.

Photometric analysis of bacterial suspensions. Report No.I.  
Zh. mikrobiol. 40 no.7:102-106 JI'63 (MIRA 17:1)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh  
biologicheskikh preparatov imeni Tarasevicha.



FIKHMAN, B.A.

Immersion microrefractometry of bacterial cells. Zhur. mikrobiol.,  
epid. i immun. 40 no.11:60-65 N '63. (MIRA 17:12)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biolo-  
gicheskikh preparatov imeni Tarasevicha.

PAKINA, N.A.; FIKHMAN, B.A.

Methodology of the quantitative determination of protoplasts  
in the culture of *Staphylococcus aureus*. Lab. delo no. 8;  
491-494 '64. (MIFA 17:12)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh bi-  
ologicheskikh preparatov im. Tarasevicha (direktor L.S.Ogloblina),  
Moskva.

FEKHMAN, B.A.

Photometric analysis of bacterial suspensions. Report No. 2: Determination of the dispersity of bacterial suspensions by transillumination. Zhur. mikrobiol., epid. i immun. 41 no.3:41-46 Mr '64.  
(MIRA 17:11)

1. Gosudarstvennyy institut meditsinskikh biologicheskikh preparatov imeni Tarasevicha.

FIKHMAN, B.A.

Refractometric analysis of isolated bacterial cells. Lab. delo.  
no.1:45-49 '65. (MIRA 18:1)

1. Kontrol'nyy institut meditsinskikh biologicheskikh preparatov  
im. L.A. Tarasevicha, Moskva.

FIKHMAN, E.A.; PETUKHOV, V.G.

Photometric analysis of bacterial suspensions. Report No.3:  
Study of some thermo-osmotic processes in bacteria. Zhur.  
mikrobiol., epid. i immun. 42 no.8:128-131 Ag '65. (MIRA 18:9)

1. Gosudarstvennyy kontrol'nyy institut imeni Tarasevicha.

L 8030-66 EPT(1)/EWA(3)/EWA(b)-2 JK

ACC NR: AT5027533

SOURCE CODE: UR/0000/63/000/000/0228/022945

AUTHOR: Filkhman, B. A. 44.5

ORG: State Control Institute im. Tarasevich (Gosudarstvennyy kontrol'-nyy institut) 44.5

TITLE: Turbidity standard for optical standardization of brucella suspensions 44.5

SOURCE: Moscow. Nauchno-issledovatel'skiy institut vaktsin i syvorotok. Vaksiny i syvorotki; materialy po proizvodstvu, no. 1, 1963, 228-229

TOPIC TAGS: brucellosis, turbidimeter, optic method, vaccine, preventive medicine, *CHEMICAL DISPERSION*

ABSTRACT: The difficulties involved in applying general turbidity standards established primarily for intestinal groups of bacteria to Brucella suspensions or vaccines prompted the author to develop a turbidity standard specifically for Brucella. Light passage studies of different Brucella fractions in the visible band of the spectrum showed that light passage of fractions containing 1 to 2 micron particles is the same for Brucella suspensions and vaccines and their curves are parallel. The numerical equivalent of a turbidity standard unit for Brucella vaccine strains (19-BA, 19, 104-M) is approximately

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L 8830-66

ACC NR: AT5027533

3  
200 million bacteria/ml. Optically, the Brucella turbidity standards do not differ from the Brucella suspensions in passing or reflected light. In their physical properties and stability, Brucella turbidity standards do not differ from the standards established by the State Control Institute. On the basis of tests conducted at the Institute of Epidemiology and Microbiology AMN SSSR, the described Brucella turbidity standards are recommended for practical application. Orig. art. has: None. 44.55

SUB CODE: 06/ SUBM DATE: 31Aug63/ ORIG REF: 000/ OTH REF: 000

BVK  
Card 2/2

PIKHMEN, B.Ya., inzhener.

Controlling the lubrication feed in lathes. Prom. energ. 12 no.4:8-9  
Ap '57. (MIRA 10:5)  
(Electric relays) (Lathes)



AUTHOR: Fikhman, B. Ya, Engineer

SOV/94-52-3-6/22

TITLE: Economy of Electric Power in Electric Drives of Hydraulic Presses (Ekonomiya elektroenergii v elektroprivodakh gidravlicheskih pressov)

PERIODICAL: Promyshlennaya Energetika, 1958, <sup>13</sup>Nr 8, pp 15-19 (USSR)

ABSTRACT: This article considers control systems for electro-hydraulic drives of presses with the object of economising electric power. The commonest control circuit is that shown in Fig.1A which employs a pressure relief valve that is in operation for a considerable part of the time that the press is closed. This naturally wastes power. The power consumption diagram for this case is that shown in Fig.2A. Expressions are given for the time of an operating cycle and for the power consumed. Analysis of the power consumption diagram leads to the conclusions that: power consumption could be reduced by using electro-hydraulic pressure control; the motor idling time could be reduced by operating the press automatically. These two questions are then considered in more detail. The hydraulic circuit for the case of pressure control is given in Fig.1B and the corresponding electrical control

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SOV/94-58-8-6/22

Economy of Electric Power in Electric Drives of Hydraulic Presses

circuit in Fig.3. This hydraulic circuit differs from the previous one in that it includes a pressure relay which switches the motor off when the press is closed. If the pressure in the press drops because of leaks in the hydraulic system, the motor starts up again. However, in presses operating at pressures of the order of 200 kg/cm<sup>2</sup> it is quite practical to reduce leakage to such an extent that the pressure can be held for up to half an hour so that the motor is only operating whilst the platens are moving. The functions of all the relays and contacts in the circuit are described. This circuit has a number of faults; it is difficult to adjust the pressure relay which does not in any case always operate at the same pressure; the pressure relay contacts operate under unfavourable conditions and the relay is inaccessible for maintenance. A better circuit is one employing electro-contact manometers types EKM-1 and EKM-2 manufactured by the Moscow 'Manometer' Works which cover the same pressure ranges as ordinary manometers. The hydraulic circuit used when the pressure is controlled by means of one of these relays is given in Fig.1C and the corresponding

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SOV/94-58-8-6/22

Economy of Electric Power in Electric Drives of Hydraulic Presses

electric circuit in Fig.4. The electro-contact manometer fulfils two functions: that of visual control instrument and that of a two position control regulator. This device stops the motor when the pressure reaches the top setting and restarts it when the bottom setting is reached. The operation of the circuit is described in detail. Other possible circuits exist including the use of a high- and a low-pressure pump combined with a pressure relay to disconnect the high-speed low-pressure pump when a certain pressure is reached. The circuits described in the article are particularly suitable when the pressing time is two minutes or more and have operated reliably with motor outputs up to 20 kW. The electro-hydraulic pressure control method is used in hydraulic presses manufactured by the Odessa Press Works and is recommended when existing installations are being modernised. There are 4 figures and 2 Soviet references.

ASSOCIATION: Odesskiy zavod pressov (Odessa Press Works)

Card 3/3

FIKHMAN, B.Ya.

The P-803 and PA-803 hydraulic presses with 40-ton capacity.  
Biul.tekh.-ekon.inform. no.3:9-12 '60.

(MIRA 13:6)

(Hydraulic presses)

S/193/60/000/012/003/018  
A004/A001

AUTHORS: Fikhman, B. Ya., Tobak, L. Z.

TITLE: The Hydraulic Program-Controlled Press: Models П969 (P969), П952 (P952), and П982 (P982)

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No.12, pp.12-15

TEXT: The Odesskiy zavod pressov (Odessa Press Plant) has developed and manufactured in 1959 the program-controlled hydraulic P969 and P952 presses for the mechanization of assembly work in the production of armature and commutators of traction electromotors, and the P982 press for the stamping of bearing end shields in the casings of traction electromotors. The models P952 and P982 are made on the basis of the model P969, which is a four-column low-pressure press, on which the part being pressed is fixed on a traveling table whose upper and lower surface are machined. Fixtures can be clamped on two T-shaped grooves on top of the table diagonal. The hydraulic drive of the press is composed of the pumping installation and tank, on whose cover the control and distributing appliances for the press control are located. The H401 (N401) and Ш-70 (Sh-70) high-pressure and low-pressure pumps are mounted on one plate, both of them driven by one a-c

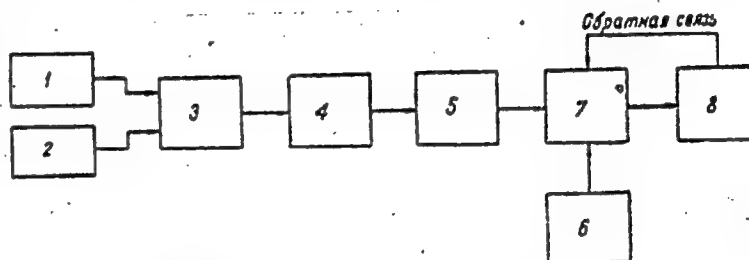
Card 1/4

S/193/60/000/012/003/018  
A004/A001

The Hydraulic Program-Controlled Press Models П969 (P969), П952, (P952), and П982 (P982)

electromotor. For feeding the control circuit a separate pump is used. The control instrumentation is without tubes and mounted on a connecting panel. The press is equipped with an electro-hydraulic system of program control in order to cut down the readjustment times of operating parameters. This system makes it possible to select the operating parameters immediately on the central control panel. Figure 2 shows the layout of the system of program control. Initial data 1 and operating program 2 are prepared in advance in the technological section. By the outer memory 3 in the form of punched cards these data are introduced into the system by input device 4, from where the signal is transmitted to inner memory 5. After transmission of the control signal 6, controller 7 is put in

Figure 2:



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A004/A001

The Hydraulic Program-Controlled Press Models П969 (P969), П952 (P952), and П982 (P982)

operation, actuating mechanisms 8, from which the operation termination signal and the attainment of the given parameters is supplied to controller 7 by way of the feedback line. The control units are mounted on low-voltage devices, therefore a unit of actuating devices has been fitted to switch on the control electromagnets by hydraulic slide valves. The actuating devices receive the instructions from the control system units and, by their contacts, transmit the voltage to the coil of the corresponding electromagnets. The hydraulic and electric circuits of the press ensure the following operations: setting, program input, operation according to given program, return, repetition of cycle. The authors present the following technical data of the P969 press: Rated capacity - 315 tons; number of capacities being programmed - 5; press stroke - 500 mm; open height - 2,000 mm; table area - 1,200 x 1,200 mm; speed of operating and idle strokes - 1.88 and 7.15 mm/sec respectively; number of loading tables - 2; stroke of loading table - 1,600 mm; speed of loading table - 150 mm/sec; operating pressure - 200 kg/cm<sup>2</sup>; number of time lags being programmed - 2; rated power of electromotor - 11 kw; overall dimensions (length x width x height) - 6,150 x 3,700 x 3,000 mm;

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The Hydraulic Program-Controlled Press Models П969 (P969), П952 (P952), and П982 (P982)

weight - 23.9 tons. The use of these program-controlled presses increases the labor productivity five times, while the introduction of one press results in savings of 108,000 rubles per year. There are 2 figures.

Card 4/4



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[Ignitron contactors and heating regulators] Ignitronnye  
kontaktery i regulatory nagreva. Moskva, Energiia, 1964.  
79 p. (Biblioteka elektrotermista, no.19)

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S/183/61/000/006/001/002  
B101/B110


AUTHORS: Zelentsov, I. G., Zubov, L. N., Fikhmar, V. D.

TITLE: Properties of polyvinyl chloride fibers

PERIODICAL: Khimicheskiye volokna, no. 6, 1961, 9-10

TEXT: A detailed report on the properties of polyvinyl chloride fibers manufactured in western countries is given on the basis of western publication data. In the USSR, a pilot plant will produce such fibers in the near future. There are 1 figure, 2 tables, and 12 non-Soviet references.

ASSOCIATION: VNIISV



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